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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,205	11/26/2003	Lawrence Pileggi	361007.000035	1204
24239	7590	02/06/2007		EXAMINER
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Research Triangle Park, NC 27709				
			ART UNIT	PAPER NUMBER
				2138
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/06/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/707,205	PILEGGI ET AL.
	Examiner	Art Unit
	Saqib J. Siddiqui	2138

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 11/16/06.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) 23,43-50,53 and 65 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-22,24-42,51,52,54-64 and 66-70 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) 1-70 are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-42 and 52-70 are drawn to a system for testing integrated circuits on a wafer, classified in class 714, subclass 724.
- II. Claims 43-46 are, drawn to the structure of a transceiver, classified in class 714, subclass 712.
- III. Claims 47-51 are drawn to the structure of an antenna system classified in class 714, subclass 712.

Inventions I, II and III are related as products which share a disclosed common utility linked to a substantial structural feature. The products in this relationship are distinct if either or both of the following can be shown: (1) that the products encompass embodiments that are NOT required to perform the common utility or (2) that the products as claimed encompass embodiments that are NOT required to have the substantial structural feature. In this case, the embodiments described in group II is sufficient to perform the functions of the invention. The embodiments taught by claims in groups I and III are not required to perform the common utility.

Inventions I, II and III are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the

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particulars of the subcombination as claimed because II and III does not require the exact embodiments as provided in group I. The subcombination has separate utility such as testing transmission facilities.

Because these inventions are independent or distinct for the reasons given above and the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

Applicant is advised that a reply to this requirement/must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.

MPEP § 809.02(a).

During a telephone conversation with Charles Moore on 01/24/07 a provisional election was made without traverse to prosecute the invention of group I, claims 1-42 and 52-70. Affirmation of this election must be made by applicant in replying to this

Office action. Claims 43-51 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Response to Amendment

Applicant's arguments with respect to claims 1-70 filed November 16, 2006 have been considered but are moot in view of the new ground(s) of rejection.

Specification

The abstract of the disclosure is objected to because Applicant mentions "usable" (line 5) instead of unusable. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22, 24-42, 51-52, 54-64 and 66-70 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 1, 30, 52 and 61:

These claims teach the limitation of forming the transceiver on an "unusable" portion of the wafer. Further, the claims also recite "to avoid using any area of the wafer useable to form an integrated circuit." Examiner would like to respectfully point out that the wafer portion is being used, since a transceiver is being formed on that specific portion. Further, it is not clear from the claim language with respect to what is the useable area being avoided. Examiner understands Applicant's contention from the specification but to clarify the claim language Applicant needs to distinctly claim the

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subject matter. An example of the correct claim language can be previously unusable portion of a wafer.

As per claims 2-29, 31-42, 53-60 and 62-70:

These claims are rejected by virtue of their dependency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title; if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being obvious under Kraz US PG-Pub no. 20030001582 A1 and further in view of Farnworth et al. US Pat no. 6,424,168 B1.

As per claims 1, 30, 52 and 61:

Kraz substantially teaches a system to test integrated circuits, method of making a system to test integrated circuits, and a method to test integrated circuits on a wafer

(Figure 3), comprising: a transceiver formed on the wafer (Figure 3 #40), wherein the transceiver is formed in one of a scribe line formed in the wafer or on an unusable portion of the wafer to permit testing of the integrated circuits during various stages of a manufacturing process and before separation of the individual integrated circuits and to avoid using any area of the wafer useable to form an integrated circuit (Figure 1 # 14); and an antenna system couplable to the transceiver (Figure 3 # 41).

Kraz does not explicitly teach the testing of plurality of integrated circuits.

However, Farnworth et al. in an analogous art teaches testing a plurality of integrated circuits (Figure 2A). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate that Kraz is testing a plurality of integrated circuits using the system described in Kraz's invention, since one of ordinary skill in the art would have realized that Kraz is merely teaching an elemental part of testing a device during semiconductor fabrication process. Incorporating Farnworth's structure within Kraz's device under test would enable Kraz's invention to test wafers of larger size. Further, Examiner would like to explain to the Applicant that Kraz's device under test can also be assumed to be the wafer of the structure of Farnworth's invention because that is well-known structure which is tested during fabrication.

As per claim 2:

Kraz/Farnworth et al. teaches the system as rejected in claim 1 above, wherein the transceiver is couplable to a plurality of integrated circuits formed on the wafer to test selected ones of the plurality of integrated circuits (Farnworth, Figure 2A).

As per claim 3:

Kraz/Farnworth et al. teaches the system as rejected in claim 2 above, wherein the transceiver is adapted to apply test signals to at least one selected integrated circuit (paragraphs [0010-0011]) of the plurality of integrated circuits to test the at least one selected integrated circuit in response to the antenna system receiving a signal (Figure 3 # 41).

As per claim 4:

Kraz/Farnworth et al. teaches the system as rejected in claim 2 above, wherein the antenna system is adapted to transmit signals corresponding to results from testing at least one selected integrated circuit of the plurality of integrated circuits (paragraph [0011]).

As per claim 5:

Kraz/Farnworth et al. teaches the system as rejected in claim 2 above, further comprising a multiplexing circuit (column 4, lines 5-40) to couple the transceiver to each of the plurality of integrated circuits.

As per claim 6:

Kraz/Farnworth et al. teaches the system as rejected in claim 2 above, wherein the antenna system comprises one of a loop antenna (paragraph [0044]), a pair of dipole antennas or an antenna array formed by loop (column 6, lines 59-61) or dipole antenna elements.

As per claims 7-20:

Kraz/Farnworth et al. teaches the system as rejected in claim 1 above except for

the exact specification mentioned. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use word line, bit lines, pads, scan test vectors, amplitude shift keying, real-time tests, periodic testing etc. as these are all well known techniques in testing and doing so will make the testing method of Kraz/Farnworth's invention mores stringent. Further, it has been held where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

As per claim 21:

Kraz/Farnworth et al. teaches the system as rejected in claim 1 above, wherein the transceiver comprises: a down converter to convert a received radio frequency (RF) signal to an intermediate frequency (IF) signal; a received signal strength indicator; a limiting amplifier to amplify the IF signal in response to the RSSI (Figures 4-10).

As per claim 22:

Kraz/Farnworth et al. teaches the system as rejected in claim 1 above except for illustrating the exact specification of the transceiver mentioned above. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the basic structure of the transceiver since it has been held where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

As per claims 24-29:

Kraz/Farnworth et al. teaches the system as rejected in claim 1 above except for the exact specification of the antenna mentioned above. It would have been obvious to

one of ordinary skill in the art at the time the invention was made to use the basic structure of the antenna system since it has been held where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

As per claims 31-42:

These claims are rejected under the same grounds as the above rejections.

As per claims 52, 54-64 and 66-70:

These claims are rejected under the same grounds as the above rejections.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saqib J. Siddiqui whose telephone number is (571) 272-6553. The examiner can normally be reached on 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decayd can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Examiner's Note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part

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of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SS
Saqib Siddiqui
Art Unit 2138
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